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phospho-PP2A alpha (Ser307) Recombinant Rabbit mAb

Catalog # AP97026

Product Information

Application	WB, IHC-P, IHC-F, IF, IP
Primary Accession	P62714
Other Accession	P62714
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	35575
Physical State	Liquid
Immunogen	A synthesized peptide derived from human PP2A alpha around the phosphorylation site of S307
Epitope Specificity	PD-pY-FL
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the PPP phosphatase family. PP-1 subfamily.
SUBUNIT	PP2A consists of a common heterodimeric core enzyme, composed of PPP2CA a 36 kDa catalytic subunit (subunit C) and PPP2R1A a 65 kDa constant regulatory subunit (PR65 or subunit A), that associates with a variety of regulatory subunits. Proteins that associate with the core dimer include three families of regulatory subunits B (the R2/B/PR55/B55, R3/B''/PR72/PR130/PR59 and R5/B'/B56 families), the 48 kDa variable regulatory subunit, viral proteins, and cell signaling molecules. Interacts with NXN; the interaction is direct (By similarity). Interacts with TP53, SGOL1 and SGOL2. Interacts with AXIN1; the interaction dephosphorylates AXIN1. Interacts with PIM3; this interaction promotes dephosphorylation, ubiquitination and proteasomal degradation of PIM3. Interacts with RAF1.
Post-translational modifications	Reversibly methyl esterified on Leu-309. Carboxyl methylation may play a role in holoenzyme assembly, enhancing the affinity of the PP2A core enzyme for some, but not all, regulatory subunits. It varies during the cell cycle. Phosphorylation of either threonine (by autophosphorylation-activated protein kinase) or tyrosine results in inactivation of the phosphatase. Auto-dephosphorylation has been suggested as a mechanism for reactivation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	PP2A is the major phosphatase for microtubule-associated proteins (MAPs). PP2A can modulate the activity of phosphorylase B kinase casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase. Cooperates with SGOL2 to protect centromeric cohesin from separase-mediated cleavage in oocytes specifically during meiosis I. Can dephosphorylate SV40 large T antigen and p53/TP53. Activates RAF1 by dephosphorylating it at 'Ser-259'.

Additional Information

Gene ID	5516
Other Names	HJS3; NEDLBA; PP2Ac; PP2CA; PP2Calpha; RP-C; PP2Abeta; PP2CB; PP2A; D8Ertd766e; Pp2a1; Pp2a2; PP2AB_HUMAN; PPP2CB; PP2A-beta; 3.1.3.16; PP2AA_HUMAN; PPP2CA; PP2A-alpha; Replication protein C (RP-C); PP2AB_MOUSE; PP2AA_MOUSE; PP2AB_RAT; PP2AA_RAT; protein phosphatase 2 catalytic subunit alpha; protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform; protein phosphatase 2, catalytic subunit, alpha isozyme; protein phosphatase 2A catalytic subunit, alpha isoform; PPP2CA | PP2A alpha (phospho-S307); p-PP2A alpha; phospho-PP2A alpha; p-PPP2CA; PPP2CA | PP2A alpha (phospho-Ser307)
Dilution	WB=1:500-2000,IHC-P=1:50-200,IHC-F=1:50-200,IF=1:50-200,IP=1:20-50
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	PPP2CB (HGNC:9300)
Function	Catalytic subunit of protein phosphatase 2A (PP2A), a serine/threonine phosphatase involved in the regulation of a wide variety of enzymes, signal transduction pathways, and cellular events (Probable). PP2A can modulate the activity of phosphorylase B kinase, casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase. Part of the striatin-interacting phosphatase and kinase (STRIPAK) complexes. STRIPAK complexes have critical roles in protein (de)phosphorylation and are regulators of multiple signaling pathways including Hippo, MAPK, nuclear receptor and cytoskeleton remodeling. Different types of STRIPAK complexes are involved in a variety of biological processes such as cell growth, differentiation, apoptosis, metabolism and immune regulation (PubMed:18782753).
Cellular Location	Cytoplasm. Nucleus. Chromosome, centromere. Cytoplasm, cytoskeleton, spindle pole. Note=In prometaphase cells, but not in anaphase cells, localizes at centromeres. During mitosis, also found at spindle poles

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